AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A system for diagnosing an aircraft component or component assembly for maintenance and repair purposes, said system comprising:

(a) means positioned in or on said aircraft for monitoring an aircraft component and for providing status information signals regarding the status of said aircraft component,

(b) means for generating energy for said means for monitoring, wherein said means for generating energy comprises means for converting energy taken from surroundings of said means for generating energy,

(c) first means for transmitting said status information signals and first means for receiving interrogation signals,

(d) means for processing including second means for transmitting said interrogation signals and second means for receiving said status information signals for processing to provide maintenance and repair information, and

(e) means for displaying said maintenance and repair information,

wherein said means for monitoring comprises means for storing said status information signals sensed during flight for evaluation by said means for processing on the ground.

Claim 2 (Original): The system of claim 1, wherein said means for monitoring comprises means for preliminary processing of said status information signals to provide transmittable signals to said first means for transmitting in response to said interrogation signals from said second means for transmitting.

Claim 3 (Original): The system of claim 1, wherein said means for monitoring comprises its own means for operating independently of any aircraft power source.

Claim 4 (Original): The system of claim 1, wherein said means for monitoring and said means for processing are separate, wherein said first means for transmitting and first means for receiving are part of said separate means for monitoring, and wherein said second means for transmitting and said second means for receiving are part of said separate means for processing.

Claim 5 (Original): The system of claim 4, wherein said first and second means for transmitting and receiving are respectively wireless transmitters and wireless receivers.

Claim 6 (Original): The system of claim 4, wherein said first and second means for transmitting and receiving are respectively infrared transmitters and infrared receivers.

Claim 7 (Original): The system of claim 1, wherein said means for processing comprises means for determining, on the basis of said status information signals, the presence or absence of a fault in said aircraft component, said means including rated reference information.

Claim 8 (Cancelled).

Claim 9 (Currently Amended): A system for diagnosing an aircraft component or component assembly for maintenance and repair purposes, said system comprising:

(a) means positioned in or on said aircraft for monitoring an aircraft component and for providing status information signals regarding the status of said aircraft component,

(b) first means for transmitting said status information signals and first means for receiving interrogation signals,

(c) means for processing including second means for transmitting said interrogation signals and second means for receiving said status information signals for processing to provide maintenance and repair information, and

(d) means for displaying said maintenance and repair information,

~~The system of claim 1,~~ wherein said means for processing comprises means for storing therein rated maintenance and repair reference information for evaluating said status information signals with reference to said rated maintenance and repair reference information.

Claim 10 (Original): The system of claim 1, wherein said means for display displays said maintenance and repair information and for pinpointing any particular aircraft component to be diagnosed.

Claim 11 (Original): The system of claim 1, wherein said means for processing and said means for displaying together form a handset.

Claim 12 (Original): The system of claim 1, wherein said means for monitoring is positioned for sensing wear and tear of a wing flap actuator and for providing a respective actuator status information signal.

Claim 13 (Original): The system of claim 1, wherein said means for monitoring is positioned in a bottom area of a hydraulic container in said aircraft for sensing a quality of a hydraulic fluid in said hydraulic container.

Claim 14 (Original): The system of claim 1, wherein said means for monitoring is positioned in an aircraft fuel tank in an area of a water drainage valve for sensing a water concentration or content in said fuel tank.

Claim 15 (Original): The system of claim 1, further comprising means for linking transmission between said means for monitoring and said means for processing.

Claim 16 (Previously Presented): A method for diagnosing an aircraft component or component assembly for maintenance and repair purposes, said method comprising:

(a) generating energy during flight by converting energy taken from surrounding of a sensor,

(b) using said energy, a step of sensing with said sensor on said aircraft an operational status of at least one aircraft component during flight for providing component status information signals relevant to said at least one aircraft component,

(c) transmitting an interrogation signal to request said component status information signals generated in said sensing (b),

(d) transmitting said status information signals to a signal processing unit for processing to provide maintenance and repair information, and

(e) displaying said maintenance and repair information on a display screen.

Claim 17 (Original): The method of claim 16, further comprising preliminarily processing said status information signals in a signal processing module in a sensor unit for data reduction and for producing intermediate signals that represent said status information signals.

Claim 18 (Original): The method of claim 16, comprising performing said transmitting in a wireless manner.

Claim 19 (Original): The method of claim 16, comprising storing in a memory of said signal processing unit rated maintenance and repair reference information, and evaluating said status information signals with reference to said rated maintenance and repair reference information.

Claim 20 (Original): The method of claim 16, further comprising storing said status information signals in a memory prior to said processing.

Claim 21 (Previously Presented): The method of claim 19, further comprising said sensing and sorting during flight and then performing said transmitting, processing, evaluating, and displaying while said aircraft is on the ground.

Claim 22 (Previously Presented): The system of claim 1, wherein said means for generating energy comprises solar energy converters.

Claim 23 (Previously Presented): The system of claim 1, wherein said means for generating energy comprises means for converting vibrations occurring in said aircraft.

Claim 24 (Currently Amended): A system for diagnosing an aircraft component or component assembly for maintenance and repair purposes, said system comprising:

(a) means positioned in or on said aircraft for monitoring a wing flap component and for providing status information signals regarding the status of said wing flap component,

(b) first means for transmitting said status information signals and first means for receiving interrogation signals,

(c) means for processing including second means for transmitting said interrogation signals and second means for receiving said status information signals for processing to provide maintenance and repair information, and

(d) means for displaying said maintenance and repair information,

wherein said means for processing comprises means for storing therein rated maintenance and repair reference information for evaluating said status information signals with reference to said rated maintenance and repair reference information.

Claim 25 (Previously Presented): The system of claim 24, wherein said means for monitoring comprises means for preliminary processing of said status information signals to provide transmittable signals to said first means for transmitting in response to said interrogation signals from said second means for transmitting.

Claim 26 (Previously Presented): The system of claim 24, wherein said means for monitoring comprises its own means for operating independently of any aircraft power source.

Claim 27 (Previously Presented): The system of claim 24, wherein said means for monitoring and said means for processing are separate, wherein said first means for transmitting and first means for receiving are part of said separate means for monitoring, and wherein said second means for transmitting and said second means for receiving are part of said separate means for processing.

Claim 28 (Previously Presented): The system of claim 27, wherein said first and second means for transmitting and receiving are respectively wireless transmitters and wireless receivers.

Claim 29 (Previously Presented): The system of claim 27, wherein said first and second means for transmitting and receiving are respectively infrared transmitters and infrared receivers.

Claim 30 (Previously Presented): The system of claim 24, wherein said means for processing comprises means for determining, on the basis of said status information signals, the presence or absence of a fault in said wing flap component, said means including rated reference information.

Claim 31 (Currently Amended): A system for diagnosing an aircraft component or component assembly for maintenance and repair purposes, said system comprising:

(a) means positioned in or on said aircraft for monitoring a wing flap component and for providing status information signals regarding the status of said wing flap component,

(b) first means for transmitting said status information signals and first means for receiving interrogation signals,

(c) means for processing including second means for transmitting said interrogation signals and second means for receiving said status information signals for processing to provide maintenance and repair information, and

(d) means for displaying said maintenance and repair information,

~~The system of claim 24,~~ wherein said means for monitoring comprises means for storing said status information signals sensed during flight for evaluation by said means for processing on the ground.

Claim 32 (Cancelled).

Claim 33 (Previously Presented): The system of claim 24, wherein said means for display displays said maintenance and repair information and for pinpointing any particular wing flap component to be diagnosed.

Claim 34 (Previously Presented): The system of claim 24, wherein said means for processing and said means for displaying together form a handset.

Claim 35 (Previously Presented): The system of claim 24, wherein said means for monitoring is positioned for sensing wear and tear of a wing flap actuator and for providing a respective actuator status information signal.

Claim 36 (Previously Presented): The system of claim 24, further comprising means for linking transmission between said means for monitoring and said means for processing.

Claim 37 (Currently Amended): A method for diagnosing an aircraft component or component assembly for maintenance and repair purposes, said method comprising:

(a) a step of sensing in or on said aircraft an operational status of at least one wing flap component for providing component status information signals relevant to said at least one wing flap component,

(b) transmitting an interrogation signal to request said component status information signals generated in said sensing (a),

(c) transmitting said status information signals to a signal processing unit for processing to provide maintenance and repair information, and

(d) displaying said maintenance and repair information on a display screen,

further comprising performing said sensing whether said aircraft is on the ground or in flight and performing said transmitting, processing, and displaying while said aircraft is on the ground.

Claim 38 (Previously Presented): The method of claim 37, further comprising preliminarily processing said status information signals in a signal processing module in a sensor unit for data reduction and for producing intermediate signals that represent said status information signals.

Claim 39 (Previously Presented): The method of claim 37, comprising performing said transmitting in a wireless manner.

Claim 40 (Previously Presented): The method of claim 37, comprising storing in a memory of said signal processing unit rated maintenance and repair reference information,

and evaluating said status information signals with reference to said rated maintenance and repair reference information.

Claim 41 (Previously Presented): The method of claim 37, further comprising storing said status information signals in a memory prior to said processing.

Claim 42 (Cancelled).

Claim 43 (Previously Presented): A system for diagnosing aircraft component or component assembly for maintenance and repair purposes, said system comprising:

(a) means positioned in or on said aircraft for monitoring a hydraulic component and for providing status information signals regarding the status of said hydraulic component,

(b) first means for transmitting said status information signals and first means for receiving interrogation signals,

(c) means for processing including second means for transmitting said interrogation signals and second means for receiving said status information signals for processing to provide maintenance and repair information, and

(d) means for displaying said maintenance and repair information.

Claim 44 (Previously Presented): The system of claim 43, wherein said means for monitoring comprises means for preliminary processing of said status information signals to provide transmittable signals to said first means for transmitting in response to said interrogation signals from said second means for transmitting.

Claim 45 (Previously Presented): The system of claim 43, wherein said means for monitoring comprises its own means for operating independently of any aircraft power source.

Claim 46 (Previously Presented): The system of claim 43, wherein said means for monitoring and said means for processing are separate, wherein said first means for transmitting and first means for receiving are part of said separate means for monitoring, and wherein said second means for transmitting and said second means for receiving are part of said separate means for processing.

Claim 47 (Previously Presented): The system of claim 46, wherein said first and second means for transmitting and receiving are respectively wireless transmitters and wireless receivers.

Claim 48 (Previously Presented): The system of claim 46, wherein said first and second means for transmitting and receiving are respectively infrared transmitters and infrared receivers.

Claim 49 (Previously Presented): The system of claim 43, wherein said means for processing comprises means for determining, on the basis of said status information signals, the presence or absence of a fault in said hydraulic component, said means including rated reference information.

Claim 50 (Previously Presented): The system of claim 43, wherein said means for monitoring comprises means for storing said status information signals sensed during flight for evaluation by said means for processing on the ground.

Claim 51 (Previously Presented): The system of claim 43, wherein said means for processing comprises means for storing therein rated maintenance and repair reference information for evaluating said status information signals with reference to said rated maintenance and repair reference information.

Claim 52 (Previously Presented): The system of claim 43, wherein said means for display displays said maintenance and repair information and for pinpointing any particular hydraulic component to be diagnosed.

Claim 53 (Previously Presented): The system of claim 43, wherein said means for processing and said means for displaying together form a handset.

Claim 54 (Previously Presented): The system of claim 43, wherein said means for monitoring is positioned in a bottom area of a hydraulic container in said aircraft for sensing a quality of a hydraulic fluid in said hydraulic container.

Claim 55 (Previously Presented): The system of claim 43, further comprising means for linking transmission between said means for monitoring and said means for processing.

Claim 56 (Previously Presented): A method for diagnosing an aircraft component or component assembly for maintenance and repair purposes, said method comprising:

(a) a step of sensing in or on said aircraft an operational status of at least one hydraulic component for providing component status information signals relevant to said at least one hydraulic component,

(b) transmitting an interrogation signal to request said component status information signals generated in said sensing (a),

(c) transmitting said status information signals to a signal processing unit for processing to provide maintenance and repair information, and

(d) displaying said maintenance and repair information on a display screen.

Claim 57 (Previously Presented): The method of claim 56, further comprising preliminarily processing said status information signals in a signal processing module in a sensor unit for data reduction and for producing intermediate signals that represent said status information signals.

Claim 58 (Previously Presented): The method of claim 56, comprising performing said transmitting in a wireless manner.

Claim 59 (Previously Presented): The method of claim 56, comprising storing in a memory of said signal processing unit rated maintenance and repair reference information, and evaluating said status information signals with reference to said rated maintenance and repair reference information.

Claim 60 (Previously Presented): The method of claim 56, further comprising storing said status information signals in a memory prior to said processing.

Claim 61 (Previously Presented): The method of claim 59, further comprising performing said sensing whether said aircraft is on the ground or in flight and performing said transmitting, processing, evaluating, and displaying while said aircraft is on the ground.

Claim 62 (New): The system of claim 9, further comprising means for generating energy for said means for monitoring, wherein said means for generating energy comprises means for converting energy taken from surroundings of said means for generating energy.

Claim 63 (New): A system for diagnosing an aircraft component or component assembly for maintenance and repair purposes, said system comprising:

(a) means positioned in or on said aircraft for monitoring an aircraft component and for providing status information signals regarding the status of said aircraft component,

(b) first means for transmitting said status information signals and first means for receiving interrogation signals,

(c) means for processing including second means for transmitting said interrogation signals and second means for receiving said status information signals for processing to provide maintenance and repair information, and

(d) means for displaying said maintenance and repair information,

wherein said means for monitoring comprises means for storing said status information signals sensed during flight for evaluation by said means for processing on the ground.

Claim 64 (New): The system of claim 63, further comprising means for generating energy for said means for monitoring, wherein said means for generating energy comprises means for converting energy taken from surroundings of said means for generating energy.